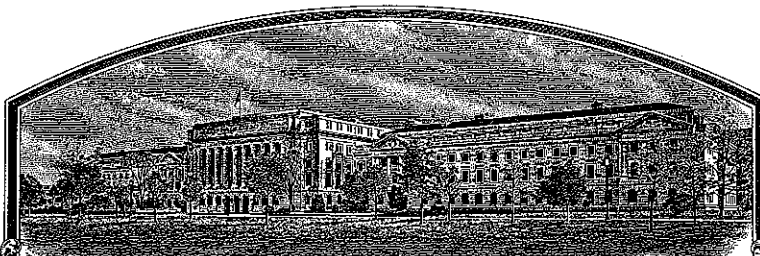


No.

200300010



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Orsetti Seed Company, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.


NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Marin'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fourteenth day of February, in the year two thousand and six.

Attest:


Commissioner
Plant Variety Protection Office
Agricultural Marketing Service



Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICEAPPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Orsetti Seed Company, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME BOS 9041		3. VARIETY NAME Marin	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 2301 Technology Parkway P.O. Box 2350 Hollister, CA 95024-2350		5. TELEPHONE (include area code) 831-636-4822		FOR OFFICIAL USE ONLY PVPO NUMBER 2003 0001	
		6. FAX (include area code) 831-636-4814			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION California		9. DATE OF INCORPORATION June 1, 1986	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Mr. Greg Orsetti 2301 Technology Parkway P.O. Box 2350 Hollister, CA 95024-2350				FILING AND EXAMINATION FEES: F E E S R E C E I V E D \$ 2705 DATE 10/16/2002 CERTIFICATION FEE: \$ 768 DATE 2/6/2006	
11. TELEPHONE (Include area code) 831-636-4822		12. FAX (Include area code) 831-636-4814		13. E-MAIL greg@orsettiseeds.com	
14. CROP KIND (Common Name) Lettuce		15. GENUS AND SPECIES NAME OF CROP Lactuca sativa L.		16. FAMILY NAME (Botanical) Asteraceae	
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22)	
20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.)		22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)	
23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER			
NAME (Please print or type) Greg P. Orsetti		NAME (Please print or type)			
CAPACITY OR TITLE V.P. Sales and Marketing		DATE 10/15/02		CAPACITY OR TITLE 1	
				DATE	

2003-00010

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be submitted to the PVPO: (1) completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Seed of Marin was first sold October 16, 2001..

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed/lsg-sd.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete.

EXHIBIT ARevisedOrigin and Breeding History of the Variety

The lettuce variety "Marin" is a phenotypically similar, although possessing some morphological differences, derivative of the variety Two Star. The distinction between these two varieties lies in a physiological difference that permits Marin to produce heads under cool season conditions of the size and weight expected of Two Star under a warm season regime. Marin has, therefore, been selected to retain many of the morphological characteristics of Two Star while altering its physiological phenotype so as to perform in a superior manner under cool season conditions.

The variety was developed using the traditional sexually reproduced method. The original naturally occurring hybrid outcross from which Two Star was developed continued to be single plant selected, through single seed descent method, until the singles mass resulted in the variety, Marin.

To develop this variety seeds from a very early generation of Two Star with deteriorating viability were germinated in an incubator transferred to flats and subsequently transplanted to a field in Gilroy, CA in late September of 1997. Since this population of seedling was generated directly from the original foundation seed used to produce the first commercial seed of Two Star, it represents a filial generation that is equivalent to an F8 population in the Two Star lineage. This level of inbreeding is sufficient to result in homozygosity for loci responsible for visually selectable traits such as morphological characters and relatively simple quantitatively inherited traits; nonetheless, at the F8 generation, a small level of variability due to heterozygosity is expected to remain. The breeding objective therefore was to exploit this residual heterozygosity as a potential basis for generating new phenotypes with novel physiological responses. Specifically it was expected that further selection of an early generation of Two Star under cool season conditions that are normally unfavorable for optimal growth might lead to a new Two Star type variety with improved performance during the winter months.

The initial population of Two Star planted in Gilroy, CA was subjected to a series of very hard frosts in late November of 1997 which severely damaged or killed a majority of the plants. Two undamaged plants among the survivors were then dug and brought to the greenhouse for seed production. Their progeny were planted in a nursery in San Juan Bautista, CA in March of 1999 and selected for large frame and head size, high leaf count and delayed bolting. Since temperatures at this time of year are characteristically favorable for lettuce growth, this cycle was not considered to be selective for adaptation to cool season growth.

A second cycle of cool season selection was initiated by planting the 1999 progeny "and F10 Two Star equivalent" in Hollister, CA in late October. This planting passed through the winter under conditions that are unfavorable to Two Star. Numerous selections made in early March emphasized large plant size and high leaf count.

Following the second cycle of cool season selection, F11 seed samples of individual selections were advanced one generation without selection at Orsetti Seed Co., Inc.'s central valley production site. Seeds from these families "equivalent in homozygosity to an F12 Two Star" were individually progeny tested for cool season performance by means of an extensive trial in the Yuma, AZ area in mid-

November 2000. Individual progeny were characterized for frame size, leaf mass, leaf count, plant size, and uniformity to type as well as uniformity within families. Seeds from thirteen families whose progenies produced large, full sized Two Star type heads with heavy weight and high leaf count and which were uniform within families and similar among families were massed.

This mass was used to provide the first commercial lot of Marin in 2001. The seed crop from this production was five generations removed from Two Star and is equivalent to an F13 generation.

This seed was extensively trialed during the cool season months extending from late fall through late spring of 2001-2002. Trials in the desert southwest and California coastal regions established the superiority of Marin to Two Star during this period. Marin proved to be uniform and stable during two generations that encompassed the first production and the preceding generation composed of the individual progeny tested families that constitute the foundation seed. Variants observed in Marin occur at a frequency of less of 1 in 400 and consist of diminutive plants that are morphologically identical to Marin in all characteristics except size.

Marin is distinguishable from its progenitor Two Star by its statistically significant 10%-15% increase in weight during the cool season months when Two Star fails to develop to full size. This situation defines Marin as an acceptable cool season complement to Two Star.

EXHIBIT B
Revised

Statement of Distinctness

Based on overall morphology, Marin is most similar to the variety Two Star.

Quantitative traits which distinguish these varieties were measured in replicated trials grown in commercial fields, Orsetti Seed Co., Inc.'s summer nursery, or the greenhouse. Seedling traits were determined using greenhouse grown seedlings at 20 days post-emergence. Seedlings were planted in alternating cells of a 23 x 66 cm, 192 cell tray, to minimize growth differences between seedlings located in interior and exterior cells. Quantitative differences were established by t-Tests comparing the two varieties.

Table I. summarizes the characters evaluated and whether these characters can be differentiated in the two varieties. Individual t-Test analyses support the summary table. (see attached Addendum to Exhibit B)

From Table I it can be concluded that:

- 1) Frame width at harvest differentiates Marin from Two Star only in the summer where Two Star is larger.
- 2) Plant height at harvest is not distinguishable during the winter; however, Two Star is consistently taller during the summer.
- 3) During the summer Marin and Two Star produce heads of similar weight, but during the winter the weight of heads from Marin is consistently much greater.
- 4) Differences in core height are consistently different between Marin and Two Star in both the summer and winter. Two Star exhibits relatively greater growth in the warm season while Marin's core elongates more rapidly during the cool season.
- 5) Although differences are small, the core diameters of Marin and Two Star are distinguishable between cool and warm seasons. Marin growth is favored in the winter while Two Star growth is favored during the summer.
- 6) Neither mature plant height nor mature inflorescence diameter is distinguishable between Marin and Two Star.
- 7) By 20 days post emergence whole seedling growth of Marin moderately exceeds that of Two Star.
- 8) Cotyledon leaf shape - Marin is elongated vs. Two Star oval.
- 9) Mature leaf indentation - Marin is shallowly dentate vs. Two Star deeply dentate.
- 10) Bolter lateral shoots - Marin present vs. Two Star absent.

U. S. Department of Agriculture
Agricultural Marketing Service
Science and Technology Program

OBJECTIVE DESCRIPTION OF VARIETY
LETTUCE *Lactuca sativa*

Entry C

NAME OF APPLICANT (S) Orsetti Seed Company, Inc.	FOR OFFICIAL USE ONLY PVPO NUMBER 200500070
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 2301 Technology Parkway P.O. Box 2350 Hollister, CA 95024-2350	VARIETY NAME EXPERIMENTAL DESIGNATION

Place numbers in the boxes for the characters which best describe this variety. Measured data should be the mean of an appropriate number (at least 10) of spaced plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The location of the test area is: San Juan Bautista, CA; Five Points, CA; Yuma, AZ	Color System Used: N/A
---	---------------------------

1. PLANT TYPE: (See list of suggested check varieties page 4)

01

01-Cutting/Leaf

02-Butterhead

03-Bibb

04-Cox or Romaine

05-Great Lakes Group

06-Vanguard Group

07-Imperial Group

08-Eastern (Ithaca) Group

09-Stem

10-Latin

11-OTHER

2. SEED:	COLOR	LIGHT DORMANCY	HEAT DORMANCY
2	1-White (Silver Gray) 2-Black (Gray Brown) 3-Brown (Amber)	1-Light Required 2-Light Not Required	1-Susceptible 2-Not Susceptible

3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day old seedling grown under optimal conditions.

2

SHAPE OF COTYLEDONS:

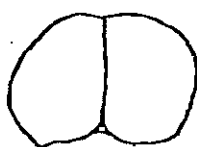
1-Broad

2-Intermediate

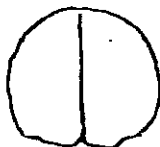
3-Spatulate

4

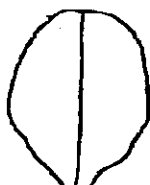
SHAPE OF FOURTH LEAF:



1



2



3



4



5



6

1 8 LENGTH/WIDTH INDEX OF FOURTH LEAF: LW x 10

2

APICAL MARGIN:

1-Entire

4-Moderately Dentate

7-Lobed

2-Crenate/Gnawed

5-Coarsely Dentate

8-OTHER (specify)

3

BASAL MARGIN:

3-Finely Dentate

6-Incised

3

UNDULATION:

1-Flat

2-Slight

3-Medium

4-Marked

3

GREEN COLOR:

1-Yellow Green

3-Medium Green

5-Blue Green

7-Gray Green

2-Light Green

4-Dark Green

6-Silver Green

ANTHOCYANIN:

1

DISTRIBUTION:

1-Absent

3-Spotted

5-OTHER (specify)

2-Margin Only

4-Throughout

1

CONCENTRATION:

1-Light

2-Moderate

3-Intense

2

ROLLING:

1-Absent

2-Present

2

CUPPING:

1-Uncupped

2-Slight

3-Markedly

1

REFLEXING:

1-None

2-Apical Margin

3-Lateral Margins

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4. MATURE LEAVES (observe harvest-mature outer leaves):

NOTE: Provide color photo of harvest-mature leaves which accurately shows color and margin characteristics.

MARGIN:

3	INCISION DEPTH: (deepest penetration of the margin)	1-Absent/Shallow (Dark Green Boston)	2-Moderate (Vanguard)	3-Deep (Great Lakes 659)
2	INDENTATION: (finest divisions of the margin)	1-Entire (Dark Green Boston)	2-Shallowly Dentate (Great Lakes 65)	3-Deeply Dentate (Great Lakes 659) 4-Crenate (Vanguard) 5-OTHER (specify)
3	UNDULATION OF THE APICAL MARGIN:	1-Absent/Slight (Dark Green Boston)	2-Moderate (Vanguard)	3-Strong (Great Lakes 659)
3	GREEN COLOR:	1-Very Light Green (Bibb)	2-Light Green (Minetto)	3-Medium Green (Great Lakes)
			4-Dark Green (Vanguard)	5-Very Dark Green 6-OTHER

ANTHOCYANIN (shown at or below 10°C):

1	DISTRIBUTION:	1-Absent	2-Margin Only (Big Boston)	3-Spotted (Calif. Cream Butter)	4-Throughout (Prize Head)	5-OTHER (specify)
	CONCENTRATION:	1-Light (Iceberg)	2-Moderate (Prize Head)	3-Intense (Ruby)		
2	SIZE:	1-Small	2-Medium	3-Large		
2	GLOSSINESS:	1-Dull (Vanguard)	2-Moderate (Salinas)	3-Glossy (Great Lakes)		
3	BLISTERING:	1-Absent/Slight (Salinas)	2-Moderate (Vanguard)	3-Strong (Prize Head)		
2	LEAF THICKNESS:	1-Thin	2-Intermediate	3-Thick		
1	TRICHOMES:	1-Absent (smooth)	2-Present (spiny)			

5. PLANT (at market stage. Choose a comparison variety appropriate for this type.):

SPREAD OF FRAME LEAVES:

4 2 cm This Variety Winter 4 1 cm Two Star (specify comparison variety)

HEAD DIAMETER (market trimmed with single cap leaf):

cm This Variety cm (specify comparison variety)

5 HEAD SHAPE: 1-Flattened 2-Slightly Flattened 3-Spherical 4-Elongate 5-Non-Heading 6-OTHER

HEAD SIZE CLASS: 1-Small 2-Medium 3-Large

2 4 HEAD COUNT PER CARTON

HEAD WEIGHT:

8 8 8 g This Variety Winter 7 7 9 g Two Star (specify comparison variety)

1 HEAD FIRMNESS: 1-Loose 2-Moderate 3-Firm 4-Very Firm

6. BUTT (bottom of market-trimmed head):

3 SHAPE: 1-Slightly Concave 2-Flat 3-Rounded

2 MIDRIB: 1-Flattened (Salinas) 2-Moderately Raised 3-Prominently Raised (Great Lakes 659)

7. CORE (stem of market-trimmed head):

3 3 mm Diameter at base of head

Ratio of head diameter/core diameter

5 4 Core height from base of head to apex:

mm This Variety Winter 4 8 mm Two Star (specify comparison variety)

8. BOLTING (Give First Water Date 4-23-01):

NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

Number of days from First Water Date to seed stalk emergence (summer conditions):

7 6 This Variety 7 4 Two Star (specify comparison variety)

3 BOLTING CLASS: 1-Very Slow 2-Slow 3-Medium 4-Rapid 5-Very Rapid

Height of mature seed stalk:

1 0 2 cm This Variety 1 0 0 cm Two Star (specify comparison variety)

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Spread of Bolter Plant (at widest point):
 3 8 cm This Variety 3 8 cm Two Star (specify comparison variety)

2 BOLTER LEAVES: 1-Straight 2-Curved

2 MARGIN: 1-Entire 2-Dentate

2 COLOR: 1-Light Green 2-Medium Green 3-Dark Green

BOLTER HABIT:

2 TERMINAL INFLORESCENCE: 1-Absent 2-Present

2 LATERAL SHOOTS: (above head) 1-Absent 2-Present

1 BASAL SIDE SHOOTS: 1-Absent 2-Present

9. MATURITY (earliness of harvest-mature head formation):

NOTE: Complete this section for at least one season.

SEASON	Applic. 1/ # of days	Check 2/ # of days	CHECK VARIETY 3/
Spring	6 3	6 3	Two Star
Summer			
Fall	7 1	7 1	Two Star
Winter	1 0 1	1 0 0	Two Star

Give planting date(s) and location(s):

Spring Wet Date 4-20-02 Gonzales, CA

Summer

Fall Wet Date 8-30-01 Salinas, CA

Winter Wet Date 11-25-00 Gila Valley, AZ

1/ First water date to harvest.

3/ Fill in check variety name on the appropriate line.

10. ADAPTATION:

PRIMARY REGIONS OF ADAPTION (tested and proven adapted):

(0=Not tested

1=Not Adapted

2=Adapted)

2 Southwest (Calif., Ariz., desert)

2 West Coast

0 Northeast

0 Northcentral

0 Southeast

0 OTHER

SEASON:

2 Spring (area West Coast)

2 Fall (area West Coast, Southwest)

0 Summer (area)

2 Winter (area Southwest, West Coast)

0

GREENHOUSE:

0-Not tested

1-Not Adapted

2-Adapted

1

SOIL TYPE:

1-Mineral

2-Organic

3-Both

Page 3

VIRUS

- ☒ 1 Big Vein
☒ 1 Lettuce Mosaic
☐ 0 Cucumber Mosaic
☐ 0 Broad Bean Wilt
☐ 0 Turnip Mosaic
☒ 1 Beet Western Yellows
☒ 1 Lett. Infectious Yellows
☐ Other Virus _____

INSECTS

- ☒ 1 Cabbage Loopers
☒ 1 Root Aphids
☒ 1 Green Peach Aphid
☐ 0 Other Insect _____

FUNGAL/BACTERIAL

- ☒ 1 Corky Root Rot (Pythium Root Rot) 200300010
☒ 1 Downy Mildew (Races _____)
☐ 0 Powdery Mildew
☒ 1 Sclerotinia Rot
☐ 0 Bacterial Soft Rot (Pseudomonas spp. & others)
☐ 0 Botrytis (Gray Mold)
☐ OTHER _____

PHYSIOLOGICAL/STRESS

- ☒ 1 Tipburn
☐ 2 Heat
☐ 0 Drought
☒ 5 Cold
☒ 2 Salt
☐ 0 Brown Rib (Rib Discoloration, Rib Blight)
☐ OTHER _____

POST HARVEST

- ☐ 0 Pink Rib
☐ 0 Russet Spotting
☐ 0 Rusty Brown Discoloration
☐ 0 Internal Rib Necrosis (Blackheart, Gray Rib, Gray Streak)
☐ 0 Brown Stain

2. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

13. COMMENTS:

SUGGESTED CHECK VARIETIES

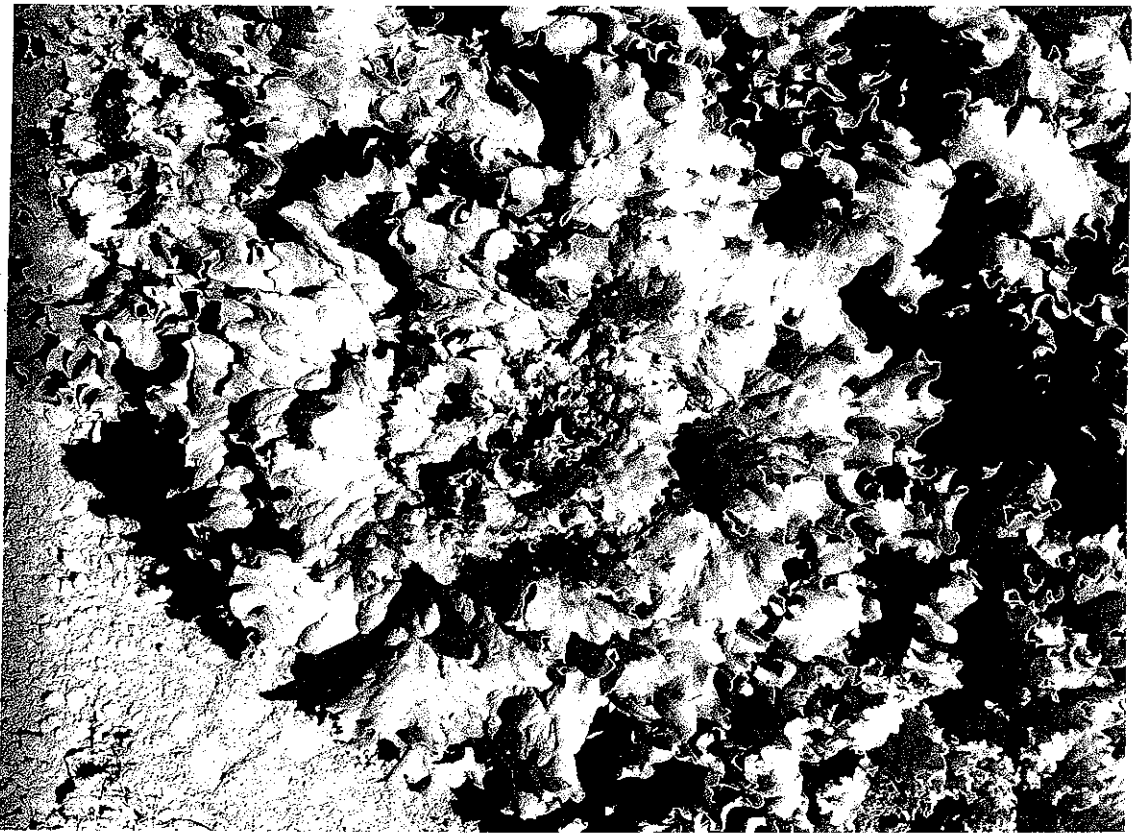
- TYPE
 1) CUTTING/LEAF
 2) BUTTERHEAD
 3) BIBB
 4) COS, OR ROMAINE
 5) GREAT LAKES GROUP
 6) VANGUARD GROUP
 7) IMPERIAL GROUP
 8) EASTERN GROUP
 9) STEM
 10) LATIN

- CHECK VARIETY
 SALAD BOWL
 DARK GREEN BOSTON
 BIBB
 PARRIS ISLAND
 GREAT LAKES 659-700
 VANGUARD
 VIVA
 ITHACA
 CELTUCE
 MATCHLESS

Marin



Fourth True Leaf of 20 Day Old Greenhouse Grown Seedlings



Plants of Two Star (top) and Marin (bottom) in the Field at Harvest Stage

Exhibit B: Lettuce - Marin
(Addendum)

Table I. Summary of comparisons between Marin and Two Star involving quantitatively determined characters.

Trait	Marin	Two Star	t-Test	Location	Evaluation Date
Frame Width at Harvest - summer	39.5	42.1	**	Five Points, CA	07/16/01
Frame Width at Harvest - winter	42.0	41.2	ns	Yuma, AZ	01/07/02
Plant Height at Harvest - summer	24.0	26.6	**	Five Points, CA	07/16/01
Plant Height at Harvest - winter	27.0	27.4	ns	Yuma, AZ	01/07/02
Head Weight - summer	811.5	847.9	ns	Five Points, CA	07/16/01
Head Weight - winter	888.3	778.9	**	Yuma, AZ	01/07/02
Core Height - summer	86.3	95.5	**	Five Points, CA	07/16/01
Core Height - winter	53.9	48.6	**	Yuma, AZ	01/07/02
Core Diameter - summer	36.0	37.2	*	Five Points, CA	07/16/01
Core Diameter - winter	33.4	32.0	**	Yuma, AZ	01/07/02
Mature Plant Height - summer	101.8	100.0	ns	Five Points, CA	09/05/01
Inflorescence Diameter - summer	38.2	38.4	ns	Five Points, CA	09/05/01
Whole Seedling Weight @ 20 days	1.16	1.07	*	Hollister, CA	10/14/02

ns not significantly different at $\alpha = .05$

* significantly different at $\alpha = .05$

** significantly different at $\alpha = .01$

200300010

EXHIBIT B
(Addendum)t-Test at $\alpha = 0.05$: - Whole Seedling Weight (gm)

	<i>Marin</i>	<i>Two Star</i>
Mean	1.16212	1.0666
Variance	0.035494027	0.01617175
Observations	25	25
Pooled Variance	0.025832888	
Hypothesized Mean Difference	0	
df	48	
t Stat	2.101177961	
P(T<=t) one-tail	0.020450425	
t Critical one-tail	1.677224191	
P(T<=t) two-tail	0.04090085	
t Critical two-tail	2.01063358	

EXHIBIT B

(Addendum) Test #2 2005

t – Test Whole Seedling Weight (gm)*

	MARIN	TWO STAR
Mean Weight	3.191	2.403
Observations	25	25

*Greenhouse grown 20 days post emergence @ 68 degrees F
San Juan Bautista, CA

EXHIBIT B

200300010

(Addendum) Test #2 2005

t – Test Whole Seedling Weight (gm)*

Test date: August 15, 2005

MARIN	TWO STAR
1 3.471	1 2.733
2 2.868	2 2.734
3 3.738	3 2.293
4 3.042	4 1.879
5 3.245	5 2.751
6 2.983	6 1.483
7 3.330	7 1.798
8 3.263	8 2.404
9 3.182	9 3.101
10 3.436	10 2.878
11 2.548	11 2.440
12 3.022	12 2.610
13 3.276	13 2.544
14 2.877	14 2.675
15 3.352	15 3.043
16 3.004	16 2.716
17 3.174	17 2.442
18 2.835	18 2.505
19 3.670	19 1.437
20 2.821	20 1.221
21 3.936	21 2.510
22 2.730	22 2.193
23 3.713	23 2.758
24 3.208	24 2.613
25 <u>3.046</u>	25 <u>2.312</u>
TOTAL 79.770	60.074
MAN WT 3.191 gm	2.403 gm

EXHIBIT B
(Addendum)

200300010

t-Test at $\alpha = 0.05$: Winter - Plant Height at Harvest (cm)

	Marin	Two Star
Mean	26.96875	27.421875
Variance	2.88608871	2.114667339
Observations	32	32
Pooled Variance	2.500378024	
Hypothesized Mean Difference	0	
df	62	
t Stat	-1.146238994	
P(T<=t) one-tail	0.128050505	
t Critical one-tail	1.669804988	
P(T<=t) two-tail	0.25610101	
t Critical two-tail	1.99896931	

t-Test at $\alpha = 0.05$: Summer - Head Weight (gm)

	Marin	Two Star
Mean	811.4583333	847.9166667
Variance	6807.402482	9886.775362
Observations	48	24
Pooled Variance	7819.196429	
Hypothesized Mean Difference	0	
df	70	
t Stat	-1.64920917	
P(T<=t) one-tail	0.051792906	
t Critical one-tail	1.666915068	
P(T<=t) two-tail	0.103585811	
t Critical two-tail	1.994435479	

t-Test at $\alpha = 0.01$: Winter - Head Weight (gm)

	Marin	Two Star
Mean	888.28125	778.90625
Variance	8870.337702	8310.861895
Observations	32	32
Pooled Variance	8590.599798	
Hypothesized Mean Difference	0	
df	62	
t Stat	4.720264268	
P(T<=t) one-tail	6.93718E-06	
t Critical one-tail	2.388005669	
P(T<=t) two-tail	1.38744E-05	
t Critical two-tail	2.657470759	

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ORSETTI SEED COMPANY
2301 TECHNOLOGY PARKWAY
HOLLISTER, CA 95023

ITEM: LETTUCE
FIELD VARIETY: TWO STAR PVP
LOCATION: YUMA, ARIZONA

MARIN/TWO STAR HEAD WEIGHT

DATE: 2/28/2003

PLANTING DATE/WET DATE: 11/23/02

MARIN PLANTING NO: 80499 HEAD WEIGHT (GM)
878.6
840.5
896.3
895.6
887.3
886.9
890.2
889.3
882.8
878.5
884.6
891.9
886.1
879.4
881.7
887.8
891.3
885.1
898.1
882.2
893.4
887.8
883.5
891.2
TOTAL: 21,250.10 GRAMS
$21250.1/24 = 885.42$
$885.42 = 46.8\#/CTN.$

TWO STAR PVP PLANTING NO: 80498 HEAD WEIGHT (GM)
776.5
780.6
790.2
801.1
795.2
761.6
775.4
762.5
776.8
783.4
781.5
805.3
763.4
750.7
758.3
768.8
778.4
810.5
735.6
794.5
779.9
802.4
791.3
784.2
TOTAL: 18,708.10 GRAMS
$18,708.10/24 = 779.50$
$779.50 = 41.2\#/CTN.$

EXHIBIT B: LETTUCE, MARIN
(Addendum) Test #2

TABLE II SUMMARY OF HEAD WEIGHT COMPARISON BETWEEN MARIN
AND TWO STAR

HEAD WEIGHT gm	EVALUATION DATE	VARIETY	LOCATION
885.44*	Winter 2/28/03	MARIN	YUMA, ARIZ
779.50*	Winter 2/28/03	TWO STAR	YUMA, ARIZ

* Mean wt of 24 heads

EXHIBIT B
(Addendum)

200300010

t-Test at $\alpha = 0.01$: Summer - Core Height (mm)

	Marin	Two Star
Mean	86.22916667	95.5
Variance	124.010195	313.826087
Observations	48	24
Pooled Variance	186.3782738	
Hypothesized Mean Difference	0	
df	70	
t Stat	-2.716321195	
P(T<=t) one-tail	0.004155128	
t Critical one-tail	2.380802471	
P(T<=t) two-tail	0.008310256	
t Critical two-tail	2.647902875	

t-Test at $\alpha = 0.01$: Winter - Core Height (mm)

	Marin	Two Star
Mean	53.875	48.625
Variance	19.85483871	21.72580645
Observations	32	32
Pooled Variance	20.79032258	
Hypothesized Mean Difference	0	
df	62	
t Stat	4.605626134	
P(T<=t) one-tail	1.04753E-05	
t Critical one-tail	2.388005669	
P(T<=t) two-tail	2.09506E-05	
t Critical two-tail	2.657470759	

t-Test at $\alpha = 0.05$: Summer - Core Diameter (mm)

	Marin	Two Star
Mean	36	37.20833333
Variance	6.042553191	2.346014493
Observations	48	24
Pooled Variance	4.82797619	
Hypothesized Mean Difference	0	
df	70	
t Stat	-2.199703712	
P(T<=t) one-tail	0.015565943	
t Critical one-tail	1.666915068	
P(T<=t) two-tail	0.031131885	
t Critical two-tail	1.994435479	

EXHIBIT B
(Addendum)

200300010

t-Test at $\alpha = 0.01$: Summer - Frame Width at Harvest (cm)

	<i>Marin</i>	<i>Two Star</i>
Mean	39.54166667	42.14583333
Variance	2.828014184	6.619112319
Observations	48	24
Pooled Variance	4.073660714	
Hypothesized Mean Difference	0	
df	70	
t Stat	-5.161029477	
P(T<=t) one-tail	1.09782E-06	
t Critical one-tail	2.380802471	
P(T<=t) two-tail	2.19564E-06	
t Critical two-tail	2.647902875	

t-Test at $\alpha = 0.05$: Winter - Frame Width at Harvest (cm)

	<i>Marin</i>	<i>Two Star</i>
Mean	41.96875	41.21875
Variance	3.418346774	3.369959677
Observations	32	32
Pooled Variance	3.394153226	
Hypothesized Mean Difference	0	
df	62	
t Stat	1.628379149	
P(T<=t) one-tail	0.054257985	
t Critical one-tail	1.669804988	
P(T<=t) two-tail	0.10851597	
t Critical two-tail	1.99896931	

t-Test at $\alpha = 0.01$: Summer - Plant Height at Harvest (cm)

	<i>Marin</i>	<i>Two Star</i>
Mean	24.03125	26.5625
Variance	2.39793883	4.57201087
Observations	48	24
Pooled Variance	3.112276786	
Hypothesized Mean Difference	0	
df	70	
t Stat	-5.739260338	
P(T<=t) one-tail	1.12293E-07	
t Critical one-tail	2.380802471	
P(T<=t) two-tail	2.24586E-07	
t Critical two-tail	2.647902875	

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EXHIBIT B
(Addendum)t-Test at $\alpha = 0.01$: Winter - Core Diameter (mm)

	<i>Marin</i>	<i>Two Star</i>
Mean	33.40625	31.72
Variance	3.345766129	2.876666667
Observations	32	25
Pooled Variance	3.141068182	
Hypothesized Mean Difference	0	
df	55	
t Stat	3.564436207	
P(T<=t) one-tail	0.000381529	
t Critical one-tail	2.396081982	
P(T<=t) two-tail	0.000763058	
t Critical two-tail	2.668220986	

t-Test at $\alpha = 0.05$: Summer - Mature Plant Height (cm)

	<i>Marin</i>	<i>Two Star</i>
Mean	101.7905	99.8855
Variance	28.22999447	30.94645763
Observations	20	20
Pooled Variance	29.58822605	
Hypothesized Mean Difference	0	
df	38	
t Stat	1.107479041	
P(T<=t) one-tail	0.137524025	
t Critical one-tail	1.685953066	
P(T<=t) two-tail	0.275048049	
t Critical two-tail	2.024394234	

t-Test at $\alpha = 0.05$: Summer - Inflorescence Diameter (cm)

	<i>Marin</i>	<i>Two Star</i>
Mean	38.227	38.4175
Variance	13.39555895	22.21981974
Observations	20	20
Pooled Variance	17.80768934	
Hypothesized Mean Difference	0	
df	38	
t Stat	-0.142754956	
P(T<=t) one-tail	0.443618991	
t Critical one-tail	1.685953066	
P(T<=t) two-tail	0.887237982	
t Critical two-tail	2.024394234	

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Dealer Copy

ORSETTI SEED COMPANY, INC.
2301 TECHNOLOGY PARKWAY
HOLLISTER, CA 95023-2513

2002-2003
80497-80604

GREENLEAF - N. GILA VALLEY

HARRISON FARMS, YUMA, AZ

SOWN: 11-23-02 WET DATE: 11-23-02

EVAL: 2-28-03 HARVEST: 3-3-03 F.V.: TWO STAR

TIER	BED	PLTG #	ITEM	Ft	REMARKS
1	1	80497	9040E	10	
1	2	80498	TWO STAR	10	
1	3	80499	MARIN	10	
1	4	80500	9041 SAMPLE 1	10	
2	1	80501	9041 SAMPLE 2	10	
2	2	80502	9041 SAMPLE 3	10	
2	3	80503	9041A	10	
2	4	80504	9041G	10	
3	1	80505	9041I	10	
3	2	80506	9041S	10	
3	3	80507	9041V	10	
3	4	80508	9041W	10	
4	1	80509	9041D	10	
4	2	80510	9042A SAMPLE 1	10	
4	3	80511	9042A SAMPLE 2	10	
4	4	80512	9042A SAMPLE 3	10	

200300010

EXHIBIT E

Statement of the Basis of Applicant's Ownership

Orsetti Seed Company, Inc. is the owner and developer of the lettuce variety "Marin".

All support personnel, facilities and financial assistance required in the development of "Marin" were provided by Orsetti Seed Company, Inc.

REPRODUCE LOCALLY. Include form number and edition date on all reproductions.

FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E

STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Orsetti Seed Company, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER BOS 9041	3. VARIETY NAME Marin
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 2301 Technology Parkway P.O. Box 2350 Hollister, CA 95024-2350	5. TELEPHONE (include area code) 831-636-4822	6. FAX (include area code) 831-636-4814
7. PVPO NUMBER		200300010

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☒ YES ☐ NO

10. Is the applicant the original owner?

☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (if needed, use the reverse for extra space):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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